

Description of a new species of the genus *Paramartyria* (Lepidoptera, Micropterigidae) from Taiwan

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Abstract A new species, *Paramartyria anmashana* sp. nov., is described from Taiwan, with figures of the male and female genitalia. This is the fourth species of the genus from Taiwan.

Key words Micropterigidae, *Paramartyria*, *Paramartyria anmashana* sp. nov., Taiwan, taxonomy.

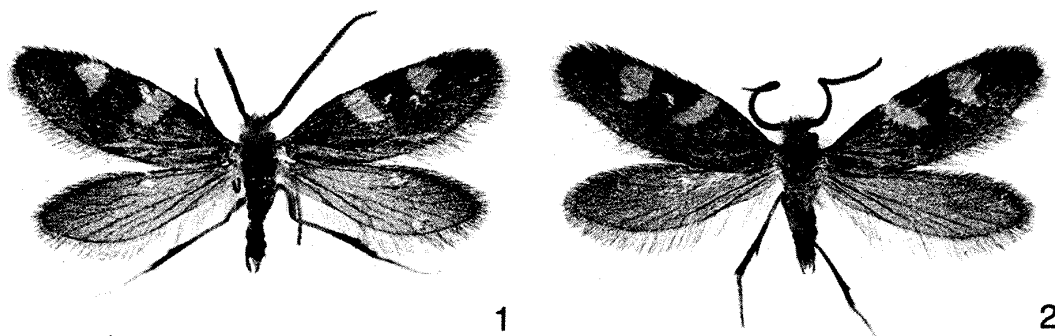
The genus *Paramartyria* was established by Issiki (1931) on the basis of five new species, of which three species, *P. bimaculatella*, *P. ovaella* and *P. maculatella*, are distributed in Taiwan and the other two, *P. immaculatella* and *P. semifasciella*, in Japan. Although ten species have been described under the genus *Paramartyria* until now (Yang, 1980, 1995; Kaltenbach & Speidel, 1982; Mey, 1997), no more species have been added to the Taiwanese fauna since Issiki (1931). In the present paper, I describe a new species, *Paramartyria anmashana* sp. nov., from Taiwan with figures of the male and female genitalia.

The holotype and some paratypes of the new species are deposited in the collection of the Department of Zoology, National Science Museum, Tokyo and other paratypes are in my collection at the Zoological Laboratory, Meijo University.

Paramartyria anmashana sp. nov. (Figs 1, 3–9)

Forewing length 4.4 mm (holotype), 4.3–4.9 mm in males, 4.2 mm in female.

Head. Head capsule blackish brown; frons, vertex and postcranial region densely covered with long hairy orange scales; other parts almost naked. Antenna about 2/3 length of forewing in male, just beyond a half of forewing in female; flagellum 42–46 segments (mean 45.4, $n=26$) in males, 36 segments in female; scape and pedicel with long hairy fuscous scales,



Figs 1–2. *Paramartyria* spp. from Taiwan. 1. *P. anmashana* sp. nov. 2. *P. maculatella*.

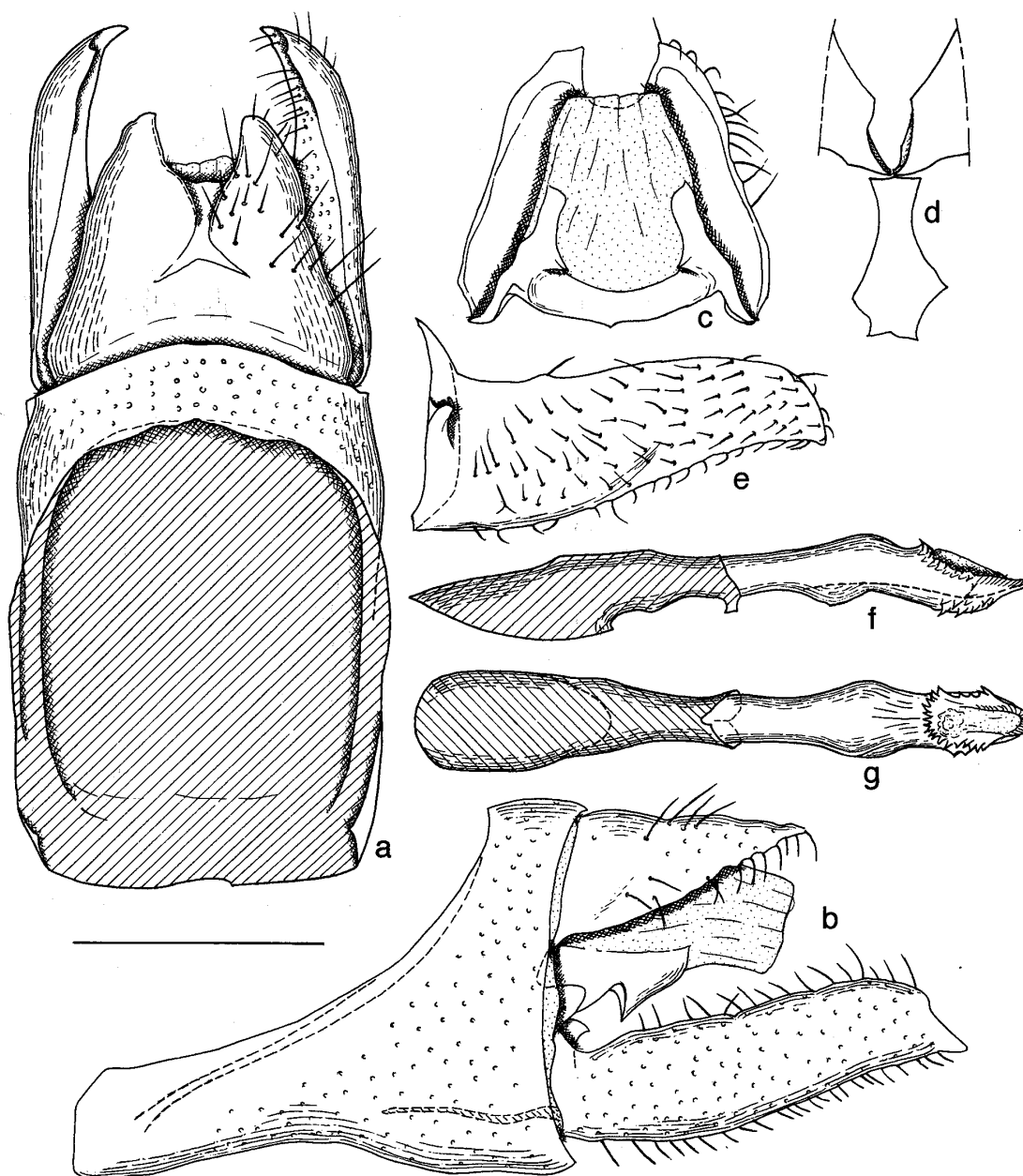


Fig. 3. Male genitalia of *Paramartyria anmashana* sp. nov. (a: dorsal view and aedeagus removed, b: *ditto*, lateral view, c: 10th segment in ventral view, d: median plate, e: gonopod, f: aedeagus in lateral view, g: *ditto*, dorsal view). Scale 0.25 mm.

sparsely covered with orange hairs on dorsal part of scape; flagellum blackish brown, surrounded with fuscous hairy scales on swollen part of each segment. Maxillary palpus 5-segmented, dull yellow, basal three segments with brownish orange scales; 4th and 5th segments with dull orange scales. Labial palpus 2-segmented.

Thorax. Tegula with hairy orange scales; mesonotum and mesoscutellum covered with glossy purple scales; mesonotum margined with orange scales, with a few metallic blue scales on the middle; mesoscutellum mixed with hairy orange scales; metanotum and metascutellum almost naked, blackish brown; metascutellum with hairy blackish brown scales on the middle; pleural region roughly covered with blackish brown scales with purple luster. Legs covered with blackish brown scales, paler and glossy on inner surface of each femur; end of

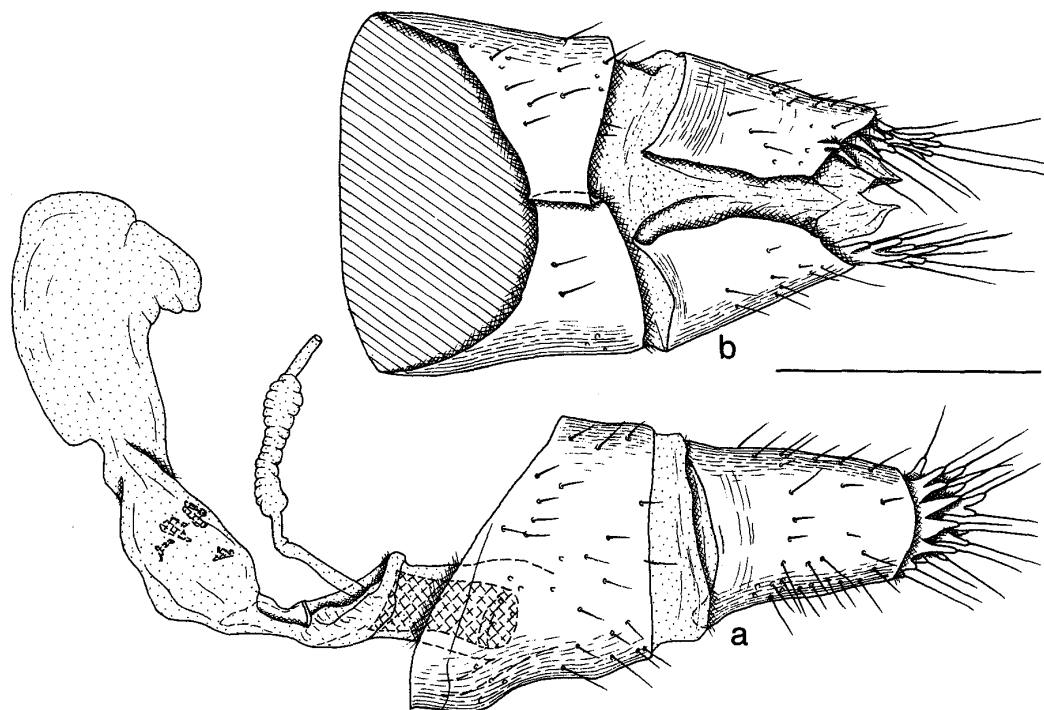


Fig. 4. Female genitalia of *Paramartyria anmashana* sp. nov. (a: lateral view, b: 9th ring and 10+11th segment in dorsal view). Scale 0.25 mm.

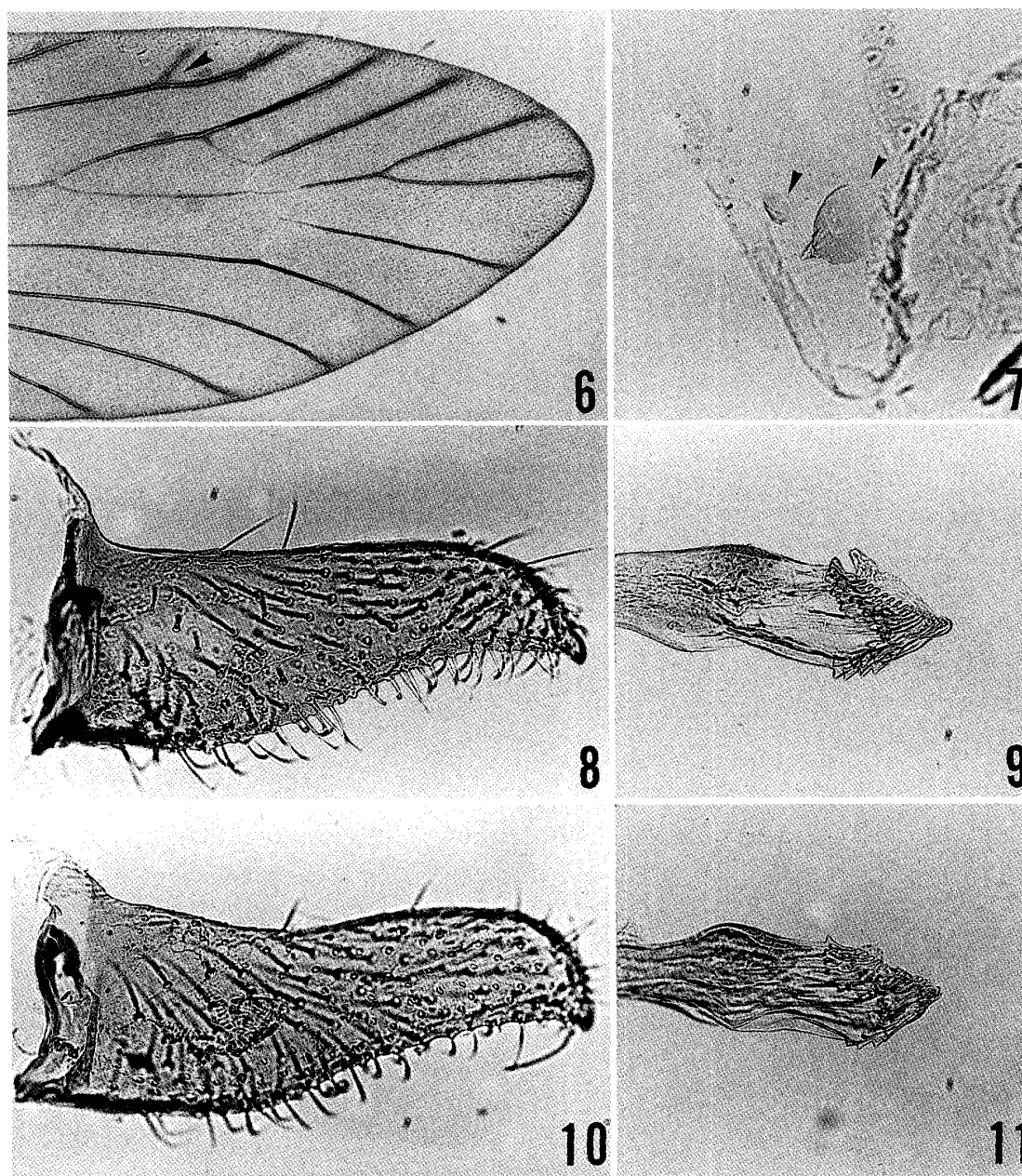
each tarsomere ringed with grayish brown scales; spurs of hind tibia naked, dull yellowish orange. Forewing reddish purple, scattered with a few metallic blue scales, with gold luster near the base, and with gold maculation comprising two costal spots and a dorso-marginal band; costal spots more luster than dorso-marginal band; of two costal spots, basal one large, on basal 2/5, running slightly outwards to the stem of M and then slightly inwards to dorso-marginal band; outer one almost trapezoidal, on basal 2/3; dorso-marginal band expanding from base to the apex along inner and outer margins, narrower or interrupted at middle; fringes fuscous, dull yellowish orange around the apex; under surface roughly scaled, blackish brown with purple luster near the apex. Hindwing roughly covered with blackish brown scales with purple luster near the apex; fringes blackish brown; under surface same as upper surface.

Abdomen. Pregenital segments grayish brown, roughly covered with glossy brown hairy scales, with hairy fuscous scales on lateral sides of 6th to 8th segments. Genital segments darker, scattered with glossy brown hairy scales.

Male genitalia (Figs 3, 8–9). Dorsal part (tergite) of 9th ring short, about 1/6 length of ventral part. Gonopod (valva) slender, with a dorso-medially extending short projection at about middle of basal inner margin and with a small terminal tooth (occasionally absent) at dorsal and ventral corners, respectively; dorsal margin of gonopod almost straight. Median plate as in Fig. 4d. Phallobase slender, almost straight, as long as aedeagus; aedeagus swollen at middle, with small serrate projections surrounding gonopore; gonopore opening dorsally at terminal end of aedeagus. 10th tergite bilobed, with a U-shaped terminal incision and with a Y- or T-shaped weakly chitinated part at middle; lateral wall with two pointed projections ventrally, with a slender plate at middle of ventral side, which expands dorso-medially and is completely fused with an opposite one.



Fig. 5. *Paramartyria anmashana* sp. nov. perching on a leaf.



Figs 6-11. *Paramartyria* spp. from Taiwan. 6-9. *P. anmashana* sp. nov. (6: apical half of forewing with scales removed, 7: signa of corpus bursae, 8: gonopod, 9: aedeagus). 10-11. *P. maculatella* (10: gonopod, 11: aedeagus).

Female genitalia (Figs 4, 7). Dorsal part of 9th ring about 1/4 length of ventral part. 10+11th segment consisting of a pair of well sclerotized lateral plates; lateral plate longer than high, with finger-shaped protrusions at terminal inner margin, each of them with an apical hair. Corpus bursae membranous, elongate, with 4 small sclerites (signa) at about posterior 1/4 of corpus bursae, slightly concave and chitinized dorsally before genital chamber. Basal part of ductus spermathecae concave. Genital chamber with cylindrical sclerite inside.

Individual variability. Of 19 specimens examined, in 4 individuals R_1 vein of the forewing bifurcated near the terminal margin (Fig. 6). In this case, an opposite forewing also has the same condition.

Materials examined. Holotype ♂, TAIWAN, Taichung, Anmashan, 2,200 m, 31. VII. 1997, Y. Arita leg. Paratypes. 5 ♂, same locality as holotype, 28. VII. 1997, Y. Arita leg.; 1 ♂, same locality and date, B. Tanaka leg.; 1 ♂ 1 ♀, same locality, 29. VII. 1997, Y. Arita leg.; 3 ♂, same locality, 30. VII. 1997, Y. Arita leg.; 4 ♂, same locality, 31. VII. 1997, Y. Arita leg.; 4 ♂, same locality and date, T. Mano leg.

Distribution. Taiwan.

Biology. Adult moths were observed perching on the leaves of ferns or herbs in coniferous woods in daytime (Fig. 5). Host plants unknown.

Remarks. This species is closely related to *P. maculatella* Issiki, 1931 (Figs 2, 10–11), but is distinguishable from it by the almost trapezoid costal spot of the forewing (pentagonal or circular in *P. maculatella*) and by the straight costal margin of the gonopod, the number and size of serrate projections enclosing the gonopore, and by the deep incision of the 10th tergite in the male genitalia (costal margin of the gonopod curved, serrate projections smaller in number and rather small in size, and incision of the 10th tergite shallow in *P. maculatella*). The female of *P. maculatella* is unknown.

Bifurcation of the R_1 vein in the forewing (Fig. 6) is a primitive condition in the family Micropterigidae. In the Southern Hemisphere genera of the family this condition is common and more deeply bifurcated, but in the Northern Hemisphere genera this condition rarely occurs as an intraspecific variation. Issiki (1931) indicated that a terminal bifurcation of the R_1 vein is present in a few individuals of *P. semifasciella* Issiki and *P. bimaculatella* Issiki. Although 36 specimens of *P. maculatella* preserved in the Zoological Laboratory of Meijo University were examined on this occasion, none of them had a bifurcation.

Acknowledgments

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摘 要

台湾産モンコバネ属 (コバネガ科) の 1 新種 (橋本里志)

モンコバネ属 *Paramartyria* は、台湾と日本の種をもとに Issiki (1931) によって創設され、その後、中国やベトナムから同属の新種が相次いで記載されてきた。最近、筆者は台湾から採集された標本を調べる機会を持ち、未記載種であることが判明したので、新種として記載した。

Paramartyria anmashana sp. nov. (Figs 1, 3-9)

本種は、やはり台湾 (阿里山) から記載された *P. maculatella* Issiki, 1931 にごく近縁な種である。*P. maculatella* とは、前翅の斑紋 (*P. maculatella* では翅端に近い紋が五角形あるいは円形に近い、本種では台形状)、雄交尾器の gonopod の上縁部の特徴 (*P. maculatella* では波状、本種では直線状) と aedeagus の gonopore を取り囲む鋸歯状の突起の数と大きさ (*P. maculatella* ではより少なく、やや小さい) などの形質によって、互いに区別される。

本種では個体変異として (19 個体のうち、4 個体で)、前翅の R_1 脈が翅端近くで分岐する特徴が認められた。また、分岐は必ず左右両方の前翅で見られた。この形質は、南半球に分布するコバネガ科では原始的な特徴として普遍的に認められるが、北半球のコバネガ科では一部の種の個体変異として見られることが報告されている。今回、同時に調べた *P. maculatella* では、分岐は全く認められなかった。本種の成虫は、日中、針葉樹の林内でシダ植物などの葉表に静止しているのが観察された。食草は不明。

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